

EXHIBIT IN - 1

DEFINITION OF TERMS

|                |   |
|----------------|---|
| $D_w$          | = Density of Water (numerically = $\gamma_w$ )      |
| $e$            | = Void Ratio  |
| LL             | = Liquid Limit                                      |
| M              | = Mass or Mass Weight ( $M = \frac{W}{32.2}$ )      |
| n              | = Porosity; Percent Voids                           |
| PI             | = Plasticity Index                                  |
| PL             | = Plastic Limit                                     |
| S              | = Degree of Saturation                              |
| SI             | = Shrinkage Index                                   |
| SL             | = Shrinkage Limit                                   |
| V              | = Total Volume of a Soil                            |
| $V_a$          | = Volume of Air                                     |
| $V_s$          | = Volume of Soil Solids                             |
| $V_v$          | = Volume of Voids                                   |
| $V_w$          | = Volume of Soil Water                              |
| $V_M$          | = Volume of Mass                                    |
| W              | = Total Weight of Soil                              |
| $W_a$          | = Weight of Air (value usually zero)                |
| $W_s$          | = Weight of Soil Solids                             |
| $W_w$          | = Weight of Soil Water                              |
| w              | = Water Content of Soil -- percent of dry weight    |
| $\gamma$       | = Unit Weight (General Definition)                  |
| $\gamma_d$     | = Unit Dry Weight                                   |
| $\gamma_m$     | = Unit Moist Weight                                 |
| $\gamma_{sat}$ | = Unit Saturated Weight                             |
| $\gamma_w$     | = Unit Weight of Water (numerically same as $D_w$ ) |
| $C_u$          | = Coefficient of Uniformity                         |
| $C_c$          | = Coefficient of Curvature                          |

EXHIBIT - IN-2

SOILS INFORMATION FOR CONSERVATION PRACTICES

| <u>Practice</u>   | <u>Soils Investigation Required</u>   | <u>Soil Factors</u>   |
|---|---|---|
| Grassed Waterways   | Field logs not normally needed but do need to consider soils information.   | Erodibility, slope, wetness, droughty, rooting depth, stony, depth to rock, slow percolation.                           |
| Terraces, Diversions, Water and Sediment Control basins       | Field logs not normally needed but do need to consider soils information.   | Depth to rock, stony, pans, erodibility, wetness, too sandy, soil blowing, slope, wetness, slow percolation.            |
| Grade Stabilization Structures (Pipe drops, pipes, box inlet) | Soil borings along centerline fill. Unified classification of logs.   | Solid footing, depth to rock, wetness, seepage lenses, piping, hard to pack, caving.                                    |
| Ponds, debris basins, dikes, pit ponds                        | Soil borings along centerline fill, in borrow areas, and in pool areas, where applicable, Unified classification of logs. | Seepage lenses, wetness, depth to rock, piping, hard to pack, stony, slow refill, caving.                               |
| Drainage Mains & Laterals                                     | Soil borings along proposed channel. Unified classification of logs.  | Stability (TR-25), depth to rock, wetness, seepage, allowable velocity, stony, frost action, caving.                    |
| Drainage Field Ditches  | Field logs not normally needed but do need to consider soils information.   | Wetness, allowable velocity, depth to rock.   |
| Subsurface Drains   | Field logs not normally needed except in special situations. Do need to consider soils information.                       | Wetness, permeability, sand material, depth, depth to rock, pans, subsides, slope, frost action, slope, caving.         |
| Irrigation  | Field logs not normally needed but do need to consider soils information.   | Intake rate (slow or fast) droughty, wetness, rooting depth, slope, erodibility, floods, stony, soil blowing, flooding. |
| Waste Storage Pond and Treatment Lagoon                       | Soil borings in area of excavation, 2 feet below lowest excavation. Unified classification of logs.                       | Wetness, seepage, depth to rock, piping, stony, hard to pack.   |
| Spring Development  | Soil borings in area of collector system.   | Depth to rock or restrictive layer.   |